

et al. ("Minnick") and further in view of U.S. Patent No. 5,479,477 to McVey et al. ("McVey"). The examiner has objected to claims 5, 10 and 16 as being dependent upon a rejected base claim, but has indicated that they would be allowable if rewritten in independent form including all the limitations of their respective base claims and any intervening claims.

2. Claims 1-5 Are Patentable Over the Cited References.

Claim 1 recites, among other limitations, the step of "identifying constraints and interdependencies among hardware resources based on both stored system and queried hardware resource characteristics." The examiner has stated that Minnick discloses identifying constraints among hardware resources based on both stored and queried hardware resource characteristics on the grounds that the "abstract teaches 'channel loading' which is a constraint on the hardware." Applicants respectfully traverse the examiner's foregoing statement. The term "channel loading" as used in the Minnick abstract refers to communications loads placed on the communications channels comprising the Minnick communications system. It has nothing to do with physical, functional or other constraints of hardware resources comprising such communications channels or the identification of same.

Claim 1 further recites the step of "generating an abstract resource specification based on the identifying of hardware resource constraints and interdependencies for use during hardware resource allocation *to enable maximum preservation of most functional and least available hardware resources during hardware resource allocation.*" (Emphasis added.) The examiner has stated that Minnick discloses this limitation at col. 2, ll. 45-50; col. 3, ll. 3-5; col. 5, l. 60 to col. 7, l. 6; and col. 24, ll. 22-65. Applicant respectfully submits that Minnick does not teach this step. The passage at col. 2, ll. 45-50 simply states that it is an object of the invention "to provide a communications system that increases the data network capacity through the use of additional

channels to increase the bandwidth or load capacity automatically as the need arises.” The passage at col. 3, ll. 3-5 simply states that an advantage of the invention is “a reliable communications system with redundant and fail safe functions at a low cost to the system users.” Neither of the foregoing passages even remotely suggests preservation of most functional and/or least available hardware resources.

The passage at col. 5, l. 60 to col. 7, l. 6 describes routing of messages from a dispatch agency to the communications channel assigned to a particular mobile unit comprising mapping of mobile units to their channel assignments. It also describes analyzing the source of each mobile unit message and routing same to the appropriate dispatch agency. It further describes coordination of tower site to tower site handoff requests from mobile units while they are roaming about the geographic area. Such handoffs can be based on mobile unit location, so that mobile units are served by towers within range, and individual tower loading, so that tower loads within the system can be balanced. While Minnick thus considers load balancing, it does not consider or teach preservation of most functional and/or least available hardware resources.

Finally, the passage at col. 24, ll. 22-65 broadly recites a system comprising a multi-channel controller for performing a number of functions, including, *inter alia*, determining loading on a first communications channel, handing off mobile units from a first communications channel to a second communications channel when the first channel is overloaded, routing messages from a first communications channel at a tower to a second communications channel at the tower when the first channel fails, and granting tower site and channel change requests to mobile units to a second tower in a second geographic area when the geographic area served by the first tower site is inadequate. None of these functions involves preservation of most functional and/or least available hardware resources as does the present invention.

In sum, none of the foregoing references teaches generating a resource specification enabling maximum preservation of most functional and least available hardware resources during hardware resource allocation or suggests such efficient allocation of resources.

Based on at least the foregoing distinctions, Applicants submit that claim 1 is patentable over Minnick in view of McVey and that claims 2-5 which depend therefrom are allowable as well. The examiner's rejections of claims 2-4 are moot in view of the foregoing.

3. Claims 6-10 Are Patentable Over the Cited References.

Claim 6 recites, among other limitations, "a processor for interpreting an abstract resource specification identifying the available system hardware resources and the constraints associated therewith *in a manner that enables maximum preservation of most functional and least available hardware resources during hardware resource allocation.*" (Emphasis added.)

The examiner has stated that Minnick discloses generating an abstract resource specification based on the identifying of hardware resource constraints and interdependencies for use during hardware resource allocation to enable maximum preservation of most functional and least available hardware resources during hardware resource allocation. The examiner has cited Minnick at col. 2, ll. 45-50; col. 3, ll. 3-5; col. 5, l. 60 to col. 7, l. 6; and col. 24, ll. 22-65 for support. Applicants respectfully traverse the examiner's foregoing statement and submit that Minnick does not disclose the foregoing limitation for the reasons set forth in the discussion of claims 1-5 above.

Based on at least the foregoing distinctions, Applicants submit that claim 6 is patentable over Minnick in view of McVey and that claims 7-10 which depend therefrom are allowable as well. The examiner's rejections of claims 7-9 are moot in view of the foregoing.

4. Claims 11-16 Are Patentable Over the Cited References.

Claim 11 recites, among other limitations, the steps of “performing a dynamic hardware resource investigation to identify hardware resource constraints and interdependencies.” The examiner has stated that Minnick discloses identifying constraints among hardware resources based on both stored and queried hardware resource characteristics on the grounds that the “abstract teaches ‘channel loading’ which is a constraint on the hardware.” Applicants respectfully traverse the examiner’s foregoing statement. The term “channel loading” as used in the Minnick abstract refers to communications loads placed on the communications channels comprising the Minnick communications system. It has nothing to do with physical, functional or other constraints of hardware resources comprising such communications channels or the identification of same.

Claim 11 further recites “interpreting an abstract hardware resource specification for use during hardware resource allocation to facilitate *maximum preservation of most functional and least available hardware resources while still enabling application hardware resource needs to be met.*” The examiner has stated that Minnick discloses generating an abstract resource specification based on the identifying of hardware resource constraints and interdependencies for use during hardware resource allocation to enable maximum preservation of most functional and least available hardware resources during hardware resource allocation. The examiner has cited Minnick at col. 2, ll. 45-50; col. 3, ll. 3-5; col. 5, l. 60 to col. 7, l. 6; and col. 24, ll. 22-65 for support. Applicants respectfully traverse the examiner’s foregoing statement and submit that Minnick does not disclose the foregoing limitation for the reasons set forth in the discussion of claims 1-5 above.

Based on at least the foregoing distinctions, Applicants submit that claim 10 is patentable over Minnick in view of McVey and that claims 11-16 which depend therefrom are allowable as well. The examiner's rejections of claims 11-15 are moot in view of the foregoing.

5. Summary and Conclusion

Applicants respectfully submit that the application is in condition for allowance and respectfully request reconsideration towards that end.

Respectfully submitted,



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